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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
CAVALLARI, DANIEL J	

ART UNIT	PAPER NUMBER
2836	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/692,580	JACOBSON ET AL.	
	Examiner	Art Unit	
	Daniel J. Cavallari	2836	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 May 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-33* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-33* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 5/1/2007 has been entered.

Claim Objections

Claims 33 are objected to because of the following informalities:

Claim 33 recites the limitation "common power source subsystem component" however a "common power source subsystem component" is not previously disclosed. There is insufficient antecedent basis for this limitation in the claim. The claim will be examined as best understood to mean "common power source component".

Claim 33 further recites the limitation "said sets of connections" however "sets of connections" are not previously disclosed. The Examiner further notes that a plurality of different connections is claimed including "a first interconnect with a plurality of power connections" and "a second interconnect with a plurality of power connections" and no distinction is made in the claims to distinguish between the pluralities of power connections in each group or between each group. There is insufficient antecedent basis for this limitation in the claim. The claim will be examined as best understood to mean "a connection".

Claim 33 recites, "a second interconnect with with a plurality of power connections..."

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 33 is rejected under 35 U.S.C. 102(b) as being anticipated by Williams et al. (hereinafter referred to as Williams) (US 5,422,561).

In regard to Claim 33

A power system comprising:

- At least one common power source component (read on by the 500KV bus, See Fig 3).
- A plurality of power system subsystem components (read on by load ref# 107, See Fig 3).
- A first interconnect (ref# 104) with a plurality of power connections (ref# 109) connecting all said power system subsystem components (ref# 107) using a respective one of the plurality of power connections of the first interconnect to connect to each one of the plurality of power system subsystem components and

said common power source subsystem component, a connection comprising Ro connections to subsystem regulated buses (read on by 220KV bus) [The Examiner notes that the recitation of "regulated bus" is nominal as the claim lacks any physical limitations associated with said regulation], where Ro is an integer greater than one (The Examiner notes that Williams teaches 10 connections of ref# 109 with the 22KV bus system), a connection further comprising U connections to unregulated buses (read on by buses ref# 106 via ref# 105) of said power system subsystem components, where U is an integer greater than one (The Examiner notes Fig 3 shows 2 connections).

- A second interconnect (read on ref# 102) with a plurality of power connections connecting every one of said power system components using a respective one of a power connection of the second interconnect to connect to each one of the other said power system components, a connection comprising at least one connection to the subsystem regulated bus (220KV, via circuit breakers) a connection further comprising at least one connection to the subsystem unregulated bus (ref# 106, via the 220KV bus) a connection further comprising PR connections to subsystem power sources (read on by the connections to generators ref# 100), where PR is an integer greater than one [The Examine notes that 4 generators are present in Fig 3], a connection further comprising E connections to subsystem energy storage elements (read on by capacitors ref# 17, See Fig 1) where E is an integer greater than one.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Siewert et al. (US 5,892,299), Hart (US 6,236,949), and Cole et al. (US 2,135,250).

In regard to Claims 1, 7, 8, 15, 16, 17, 18, 19, & 25

Siewert et al. (hereinafter referred to as Siewert) teaches a power system common power source subsystem comprising:

- A power source unregulated bus, read on by SPSS power bus (1210) (See Figure 12)
- A power source regulated bus, read on by bus 1220 (See Figure 11) as regulated by regulator (400) (See Figure 12 & Column 11, Lines 23-58) having a plurality of interconnection lines [read on by the interconnection line between power conditioner (400) and bus (1220)] to connect a plurality subsystems (read on by "Equipments 1 to J" and "Equipments (M-K) to M") each subsystem connected individually to every other subsystem using the plurality of interconnection lines of the power source regulated bus (1220).
- At least one power source (200) having an output to converter (330) (See Figure 12)

- A first group comprising a switch (260) of component (230) coupling the power source (200) to the unregulated bus (See Figure 2 and Column 4, Line 52 to Column 5, Line 21)
- At least one regulator, read on by regulator power conditioner (400) (See Figure 12) having an input from bus (1210) and an output to the regulated bus (1020). An embodiment of the power conditioner (400) taught incorporating a regulator (440) (See Figure 4 & Column 7, Lines 26-35).
- A second group comprising a switch (500) coupling an input of the regulator (400)
- At least two power system subsystem components, read on by the branch N and subgroups 1-J & M-K (See Figure 12 & Column 10, Line 27-46 & Column 11, Lines 23-34) in which all of the subsystem components are present that are present in the main system [The examiner notes that Siewert teaches N which is representative of any number therefore reads on two or more].

Siewert fails to teach:

- A second group comprising a switch located between the regulator input and the unregulated bus and a third group comprising a switch located between the regulator output and the regulated bus.
- A controller coupled with the first, second, and third group of switches as well as coupled to a sensor.

Siewert discloses a switch (500) located between a power conditioner and the power bus (1210), the power bus connected to the power conditioner (400) (Regulator) and a second switch (500) coupled to the power conditioner (400) via the bus (1220).

Siewert fails to teach switches coupled to the input and output of the regulator, thereby coupling the input and the output do to the unregulated bus (1210) and the regulated bus (1220).

Cole et al. (hereinafter referred to as Cole) teach a power supply system in which a regulator (27) is connected to an unregulated bus (20) via switch (23) and a regulated bus (22) through a second switch (28) (See Figure 1 & Page 3, Lines 34-67).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate switches between the regulator taught by Siewert between the regulator input and the unregulated bus and the regulator output and the regulated bus, as taught by Cole. The motivation would have been to provide a means to service the regulator (See Cole, Page 1, Lines 33-41).

Siewert teaches switches (i.e. 260) that can operate "automatically" (See column 5, Lines 8-21) as well as the isolation device (530) operating by a control means (See Column 8, Lines 3-18). Siewert further teaches sensors read on by feedback provided by the PEE DC bus used to control the power conditioners (400) (See Column 10, Lines 47-67) as well as a controller (1240) in which the sensors are connected via electrical lines (1215, 1225, 1205) (See Column 11, Lines 35-58).

Siewert fails to teach the controller coupled with the first, second, and third group of switches. Hart teaches switches, read on by the circuit breakers (44-47) all electrically connected via bus 7 to a controller, read on by a remote computer (See Figure 1 & Column 6, Line 26 to Column 7, Line 26 & Column 7 Lines 50-63).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate a connection between the controller, taught by Siewert, as well as the switches, also taught by Siewert, in the common fashion as taught by Hart in which a controller is attached to all the switches. The motivation would have been to provide an automated means of operating the switches in which Siewert is silent (See Siewert, Column 5, Lines 8-21)

Siewert further teaches:

In regard to Claims 2, 5, 9, 13, 20, 23, 26, & 30

- A stabilizer, read on by the source converter (300) (See Figure 12) which comprises a switch (328) and a DC/DC converter (326) as illustrated in component (324) (See Figure 3B & Column 6, Lines 53-64) and having an input coupled to a power source (200) and an output with a forth group comprising of a switch (328) (See Figure 3B) coupling the stabilizer to the unregulated bus (1210) (See Figure 12).

In regard to Claims 3, 6, 10, 14, 21, 24, 27, & 31

- The power system further comprising at least one storage element, as shown in Figure 3A, component (380), labeled "internal DC" which is described in the specification as comprising a battery (See Column 4, Line 62 to Column 5, line 7) and the source converter (300) being coupled (including storage element) being coupled to the regulator (400) (See Figure 12) wherein the storage element is coupled to the regulated bus via a forth group comprising a switch (385).

In regard to Claims 4, 12, 22, & 29

- The power source (200) comprising a battery (See Figure 2, component 220 & Column 4, Line 62 to Column 5, line 7)

In regard to Claims 11 & 28

- A load, read on by the protected electrical equipment (PEE) (See Figure 12 & Column 3, lines 46-61) and a fifth group comprising at least one switch (500), as shown located between the load (110) and the regulated bus (1220) (See Figure 12)

In regard to Claim 32

- At least one mode in which a single power source (1) (200) or another mode in which multiple power sources (N) are used to supply to the power system (See Column 10, lines 8-26).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel J. Cavallari whose telephone number is (571)272-8541. The examiner can normally be reached on Monday-Friday 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Sherry can be reached on (571)272-2800 x36. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Daniel Cavallari

July 24, 2007

MICHAEL SHERRY
SUPERVISORY PATENT EXAMINER